

To: Albright, David[Albright.David@epa.gov]
From: Rumrill, Nancy
Sent: Thur 3/16/2017 5:27:52 PM
Subject: RE: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

Ok, it's alittle wordy and less direct. However, the last sentence for them to discuss it with us should be our expectation.

Thanks, Nancy

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*Nancy Rumrill ([rumrill.nancy@epa.gov](mailto:rumrill.nancy@epa.gov))*

*Drinking Water Protection Section (WTR-3-2)*

*US EPA, Region IX*

*75 Hawthorne St.*

*San Francisco, CA 94105*

*Phone (415) 972-3293*

**From:** Albright, David  
**Sent:** Wednesday, March 15, 2017 11:37 PM  
**To:** Rumrill, Nancy <Rumrill.Nancy@epa.gov>  
**Subject:** RE: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

Nancy, here are my thoughts.

# **Ex. 5 - Deliberative Process**

# **Ex. 5 - Deliberative Process**

# **Ex. 5 - Deliberative Process**

Thanks,

David

**From:** Rumrill, Nancy

**Sent:** Wednesday, March 15, 2017 4:13 PM

**To:** Albright, David <[Albright.David@epa.gov](mailto:Albright.David@epa.gov)>

**Subject:** FW: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

David, Proposed response:

Hi Rebecca,

## **Ex. 5 - Deliberative Process**

Let us know if you would like to discuss this further.

Thanks, Nancy

Let me know if this works for you.

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From: JAMES D WALKER

Ex. 6 - Personal Privacy

Sent: Tuesday, March 14, 2017 9:10 AM

To: Rumrill, Nancy <Rumrill.Nancy@epa.gov>

Subject: RE: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

Hi Nancy,

These are my initial thoughts.

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

I agree that we should not commit 100 percent to a particular response and should retain flexibility for draft permit conditions.

Thanks,

Jim

From: Rumrill, Nancy

Sent: Thursday, March 9, 2017 5:43 PM

To: JAMES D WALKER

Subject: FW: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

Hi Jim,

Please consider the following information from Excelsior. Do you have some initial thoughts on this? Would you provide a few comments on the information expected in the response?

We aren't going to commit to a particular response because I don't think they will provide enough detail and we want flexibility in how we write up the draft permit conditions (but of course not in conflict with ADEQ).

Thanks, Nancy



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From: Rebecca Sawyer [<mailto:rsawyer@excelsiormining.com>]

Sent: Thursday, March 09, 2017 2:15 PM

To: Albright, David <Albright.David@epa.gov>; Rumrill, Nancy <Rumrill.Nancy@epa.gov>

Cc: ajones@clearcreekassociates.com; Roland Goodgame <rgoodgame@excelsiormining.com>; Stephen Twyerould <stwyerould@excelsiormining.com>

Subject: Excelsior Response to EPA February 27, 2017 Comments Gunnison Copper UIC

David and Nancy;

In our joint meeting on February 22, 2017, we discussed EPA's draft comment 1. At that time we understood that EPA was in general agreement with the following response. This issue has implications related to DEQ's draft APP so we would like confirmation of your concurrence, while we are finalizing our comment responses. Please review the following response and confirm that this is acceptable to EPA.

Thank you for your consideration of this request.

Becky

1. Provide a proposal to demonstrate the effectiveness of wellfield operations and conduct model validation and, if necessary, recalibration based on early Stage 1 operations performance, prior to full implementation of commercial-scale ISR operations in Stage 1 and later stages. An EPA review of this early performance and demonstration of effectiveness will be required prior to EPA approval and initiation of full-scale commercial operations. The timeline for this initial demonstration phase should not exceed two years. The proposed intermediate monitoring wells and other well locations for this initial phase should be specified and shown on a map in the updated application. Subsequent monitoring well locations, proposed as ISR operations expand, will be subject to prior EPA approval.

Excelsior should amend and update the application accordingly.

Excelsior Response:

Excelsior plans to operate the wellfield as a commercial, full scale operation in the first year. Excelsior recognizes that the data collected over the first year of operations are important in evaluating the performance of the groundwater computer model that has been used to justify the Hydraulic Control containment scheme. Much will be learned during the first year of operations; however, every subsequent mining block will also have unique aspects and challenges. It is therefore important to recognize that the first year is not necessarily representative of the entire wellfield operations. Full scale operations over time will provide a complete understanding of in situ conditions and what is necessary for control of mining solutions. Excelsior understands that EPA will require review of the early performance of the mining operation and will commit to providing a detailed report describing the first year's performance and evaluation of the groundwater computer model.

During the first year of in situ mining, considerable data and operational experience will be gathered and compiled. All wells designated as intermediate monitor wells (IMWs) will be fitted with a transducer that will measure both water levels and specific conductivity at least once daily. Recovery and injection rates for all Class III wells will be recorded on a daily basis. Water levels at observation wells will be monitored to show an inward gradient at the hydraulic control

wells. A summary report will be provided to EPA. Model updates and adjustment will be completed, as needed. This will include updated hydraulic parameters, comparison with IMW results, and simulation(s) to demonstrate hydraulic control. If changes are needed to maintain control, Excelsior will propose them as part of this report. This may include changing the sequence of well installation or pumping rates. Excelsior will continue operations during the EPA review and comment period.

Excelsior will amend the UIC application to include submission of a detailed report as described.